

## What is claimed:

1. An isolated nucleic acid molecule selected from the group consisting of:
- 5 a) a nucleic acid molecule comprising a nucleotide sequence which is at least 60% homologous to a nucleotide sequence of SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:7, SEQ ID NO:9, SEQ ID NO:13, SEQ ID NO:15, SEQ ID NO:20, SEQ ID NO:22, the DNA insert of the plasmid deposited with ATCC as Accession Number 98452, the DNA insert of the plasmid deposited with ATCC as Accession Number 98633, or the nucleotide sequence of the DNA insert of the plasmid deposited with ATCC as Accession Number \_\_\_\_\_, or a complement thereof;
- 10 b) a nucleic acid molecule comprising a fragment of at least 1000 nucleotides of a nucleic acid comprising the nucleotide sequence of SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:7, SEQ ID NO:9, SEQ ID NO:13, SEQ ID NO:15, SEQ ID NO:20, SEQ ID NO:22, the DNA insert of the plasmid deposited with ATCC as Accession Number 98452, the DNA insert of the plasmid deposited with ATCC as Accession Number 98633, or the nucleotide sequence of the DNA insert of the plasmid deposited with ATCC as Accession Number \_\_\_\_\_, or a complement thereof;
- 15 c) a nucleic acid molecule which encodes a polypeptide comprising an amino acid sequence at least about 60% homologous to the amino acid sequence of SEQ ID NO:2, SEQ ID NO:5, SEQ ID NO:8, SEQ ID NO:14, or SEQ ID NO:21, the amino acid sequence encoded by the DNA insert of the plasmid deposited with ATCC as Accession Number 98452, the amino acid sequence encoded by the DNA insert of the plasmid deposited with ATCC as Accession Number 98633, or the amino acid sequence encoded by the DNA insert of the plasmid deposited with the ATCC as Accession Number \_\_\_\_\_;
- 20 d) a nucleic acid molecule which encodes a fragment of a polypeptide comprising the amino acid sequence of SEQ ID NO:2, SEQ ID NO:5, SEQ ID NO:8, SEQ ID NO:14, SEQ ID NO:21, the polypeptide encoded by the DNA insert of the plasmid deposited with ATCC as Accession Number 98452, the polypeptide encoded by the DNA insert of the plasmid deposited with ATCC as Accession Number 98633, or the nucleotide sequence of the DNA insert of the plasmid deposited with ATCC as Accession Number \_\_\_\_\_,
- 25 wherein the fragment comprises at least 15 contiguous amino acid residues of the amino acid sequence of SEQ ID NO:2, SEQ ID NO:5, SEQ ID NO:8, SEQ ID NO:14, SEQ ID NO:21, the polypeptide encoded by the DNA insert of the
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plasmid deposited with ATCC as Accession Number 98452, the polypeptide encoded by the DNA insert of the plasmid deposited with ATCC as Accession Number 98633, or the polypeptide encoded by the DNA insert of the plasmid deposited with the ATCC as Accession Number \_\_\_\_\_; and

5           e)       a nucleic acid molecule which encodes a naturally occurring allelic variant of a polypeptide comprising the amino acid sequence of SEQ ID NO:2, SEQ ID NO:5, SEQ ID NO:8, SEQ ID NO:14, SEQ ID NO:21, the polypeptide encoded by the DNA insert of the plasmid deposited with ATCC as Accession Number 98452, the polypeptide encoded by the DNA insert of the  
10       plasmid deposited with ATCC as Accession Number 98633, or the nucleotide sequence of the DNA insert of the plasmid deposited with ATCC as Accession Number \_\_\_\_\_, wherein the nucleic acid molecule hybridizes to a nucleic acid molecule comprising SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:4, SEQ ID  
15       NO:6, SEQ ID NO:7, SEQ ID NO:9, SEQ ID NO:13, SEQ ID NO:15, SEQ ID NO:20, SEQ ID NO:22, the DNA insert of the plasmid deposited with ATCC as Accession Number 98452, the DNA insert of the plasmid deposited with ATCC as Accession Number 98633, or the DNA insert of the plasmid deposited with Accession Number \_\_\_\_\_ under stringent conditions.

20       2.       The isolated nucleic acid molecule of claim 1 which is selected from the group consisting of:

          a)       a nucleic acid molecule comprising the nucleotide sequence of SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:7, SEQ ID NO:9, SEQ ID NO:13, SEQ ID NO:15, SEQ ID NO:20, SEQ ID NO:22,  
25       the DNA insert of the plasmid deposited with ATCC as Accession Number 98452, the DNA insert of the plasmid deposited with ATCC as Accession Number 98633, or the nucleotide sequence of the DNA insert of the plasmid deposited with ATCC as Accession Number \_\_\_\_\_, or a complement thereof; and

30           b)       a nucleic acid molecule which encodes a polypeptide comprising the amino acid sequence of SEQ ID NO:2, SEQ ID NO:5, SEQ ID NO:8, SEQ ID NO:14, SEQ ID NO:21, the polypeptide encoded by the DNA insert of the plasmid deposited with ATCC as Accession Number 98452, the polypeptide encoded by the DNA insert of the plasmid deposited with ATCC as Accession  
35       Number 98633, or the polypeptide encoded by the DNA insert of the plasmid deposited with the ATCC as Accession Number \_\_\_\_\_.

3. The nucleic acid molecule of claim 1 further comprising vector nucleic acid sequences.

4. The nucleic acid molecule of claim 1 further comprising nucleic acid sequences encoding a heterologous polypeptide.

5. A host cell which contains the nucleic acid molecule of claim 1.

6. The host cell of claim 5 which is a mammalian host cell.

7. A non-human mammalian host cell containing the nucleic acid molecule of claim 1.

8. An isolated polypeptide selected from the group consisting of:

a) a fragment of a polypeptide comprising the amino acid sequence of SEQ ID NO:2, SEQ ID NO:5, SEQ ID NO:8, SEQ ID NO:14, SEQ ID NO:21, the polypeptide encoded by the DNA insert of the plasmid deposited with ATCC as Accession Number 98452, the polypeptide encoded by the DNA insert of the plasmid deposited with ATCC as Accession Number 98633, or the nucleotide sequence of the DNA insert of the plasmid deposited with ATCC as Accession Number \_\_\_\_\_, wherein the fragment comprises at least 15 contiguous amino acids of SEQ ID NO:2, SEQ ID NO:5, SEQ ID NO:8, SEQ ID NO:14, SEQ ID NO:21, the polypeptide encoded by the DNA insert of the plasmid deposited with ATCC as Accession Number 98452, the polypeptide encoded by the DNA insert of the plasmid deposited with ATCC as Accession Number 98633, or the polypeptide encoded by the DNA insert of the plasmid deposited with the ATCC as Accession Number \_\_\_\_\_;

b) a naturally occurring allelic variant of a polypeptide comprising the amino acid sequence of SEQ ID NO:2, SEQ ID NO:5, SEQ ID NO:8, SEQ ID NO:14, SEQ ID NO:21, the polypeptide encoded by the DNA insert of the plasmid deposited with ATCC as Accession Number 98452, the polypeptide encoded by the DNA insert of the plasmid deposited with ATCC as Accession Number 98633, or the nucleotide sequence of the DNA insert of the plasmid deposited with ATCC as Accession Number \_\_\_\_\_, wherein the polypeptide is encoded by a nucleic acid molecule which hybridizes to a nucleic acid molecule comprising SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:6, SEQ ID

NO:7, SEQ ID NO:9, SEQ ID NO:13, SEQ ID NO:15, SEQ ID NO:20, SEQ ID NO:22, the DNA insert of the plasmid deposited with ATCC as Accession Number 98452, the DNA insert of the plasmid deposited with ATCC as Accession Number 98633, or the DNA insert of the plasmid deposited with the ATCC as Accession Number \_\_\_\_\_ under stringent conditions;

c) a polypeptide which is encoded by a nucleic acid molecule comprising a nucleotide sequence which is at least 60% homologous to a nucleic acid comprising the nucleotide sequence of SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:7, SEQ ID NO:9, SEQ ID NO:13, SEQ ID NO:15, SEQ ID NO:20, SEQ ID NO:22, the DNA insert of the plasmid deposited with ATCC as Accession Number 98452, the DNA insert of the plasmid deposited with ATCC as Accession Number 98633, or the DNA insert of the plasmid deposited with ATCC as Accession Number \_\_\_\_\_; and

d) a polypeptide comprising an amino acid sequence which is at least 60% homologous to the amino acid sequence of SEQ ID NO:2, SEQ ID NO:5, SEQ ID NO:8, SEQ ID NO:14, SEQ ID NO:21, the polypeptide encoded by the DNA insert of the plasmid deposited with ATCC as Accession Number 98452, the polypeptide encoded by the DNA insert of the plasmid deposited with ATCC as Accession Number 98633, or the polypeptide encoded by the DNA insert of the plasmid deposited with ATCC as Accession Number \_\_\_\_\_.

9. The isolated polypeptide of claim 8 comprising the amino acid sequence of SEQ ID NO:2, SEQ ID NO:5, SEQ ID NO:8, SEQ ID NO:14, SEQ ID NO:21, the polypeptide encoded by the DNA insert of the plasmid deposited with ATCC as Accession Number 98452, the polypeptide encoded by the DNA insert of the plasmid deposited with ATCC as Accession Number 98633, or the polypeptide encoded by the DNA insert of the plasmid deposited with ATCC as Accession Number \_\_\_\_\_.

10. The polypeptide of claim 8 further comprising heterologous amino acid sequences.

11. An antibody which selectively binds to a polypeptide of claim 8.

12. A method for producing a polypeptide selected from the group consisting of:

a) a polypeptide comprising the amino acid sequence of SEQ ID NO:2, SEQ ID NO:5, SEQ ID NO:8, SEQ ID NO:14, SEQ ID NO:21, the

polypeptide encoded by the DNA insert of the plasmid deposited with ATCC as Accession Number 98452, the polypeptide encoded by the DNA insert of the plasmid deposited with ATCC as Accession Number 98633, or the polypeptide encoded by the DNA insert of the plasmid deposited with ATCC as Accession Number \_\_\_\_;

b) a fragment of a polypeptide comprising the amino acid sequence of SEQ ID NO:2, SEQ ID NO:5, SEQ ID NO:8, SEQ ID NO:14, SEQ ID NO:21, the polypeptide encoded by the DNA insert of the plasmid deposited with ATCC as Accession Number 98452, the polypeptide encoded by the DNA insert of the plasmid deposited with ATCC as Accession Number 98633, or the nucleotide sequence of the DNA insert of the plasmid deposited with ATCC as Accession Number \_\_\_\_, wherein the fragment comprises at least 15 contiguous amino acids of SEQ ID NO:2, SEQ ID NO:5, SEQ ID NO:8, SEQ ID NO:14, SEQ ID NO:21, the polypeptide encoded by the DNA insert of the plasmid deposited with ATCC as Accession Number 98452, the polypeptide encoded by the DNA insert of the plasmid deposited with ATCC as Accession Number 98633, or the polypeptide encoded by the DNA insert of the plasmid deposited with ATCC as Accession Number \_\_\_\_; and

c) a naturally occurring allelic variant of a polypeptide comprising the amino acid sequence of SEQ ID NO:2, SEQ ID NO:5, SEQ ID NO:8, SEQ ID NO:14, SEQ ID NO:21, the polypeptide encoded by the DNA insert of the plasmid deposited with ATCC as Accession Number 98452, the polypeptide encoded by the DNA insert of the plasmid deposited with ATCC as Accession Number 98633, or the nucleotide sequence of the DNA insert of the plasmid deposited with ATCC as Accession Number \_\_\_\_, wherein the polypeptide is encoded by a nucleic acid molecule which hybridizes to a nucleic acid molecule comprising SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:7, SEQ ID NO:9, SEQ ID NO:13, SEQ ID NO:15, SEQ ID NO:20, SEQ ID NO:22, the nucleotide sequence of the DNA insert of the plasmid deposited with ATCC as Accession Number 98452, the nucleotide sequence of the DNA insert of the plasmid deposited with ATCC as Accession Number 98633, or the nucleotide sequence of the DNA insert of the plasmid deposited with ATCC as Accession Number \_\_\_\_ under stringent conditions;

comprising culturing the host cell of claim 5 under conditions in which the nucleic acid molecule is expressed.

5      a)      contacting the sample with a compound which selectively binds to the polypeptide; and

      b)      determining whether the compound binds to the polypeptide in the sample to thereby detect the presence of a polypeptide of claim 8 in the sample.

15. A kit comprising a compound which selectively binds to a polypeptide of claim 8 and instructions for use.

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- a) contacting the sample with a nucleic acid probe or primer which selectively hybridizes to the nucleic acid molecule; and
- b) determining whether the nucleic acid probe or primer binds to a nucleic acid molecule in the sample to thereby detect the presence of a nucleic acid molecule of claim 1 in the sample.

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18. A kit comprising a compound which selectively hybridizes to a nucleic acid molecule of claim 1 and instructions for use.

- a) contacting the polypeptide, or a cell expressing the polypeptide with a test compound; and
- b) determining whether the polypeptide binds to the test compound.

35            20.    The method of claim 19, wherein the binding of the test compound to the polypeptide is detected by a method selected from the group consisting of:

- a) detection of binding by direct detection of test compound/polypeptide binding;
- b) detection of binding using a competition binding assay; and
- c) detection of binding using an assay for Dkk activity.

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21. A method of modulating the activity of a polypeptide of claim 8 comprising contacting the polypeptide or a cell expressing the polypeptide with a compound which binds to the polypeptide in a sufficient concentration to modulate the activity of the polypeptide.

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22. A method for identifying a compound which modulates the activity of a polypeptide of claim 8 comprising:

- a) contacting a polypeptide of claim 8 with a test compound; and
- b) determining the effect of the test compound on the activity of the polypeptide to thereby identify a compound which modulates the activity of the polypeptide.

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